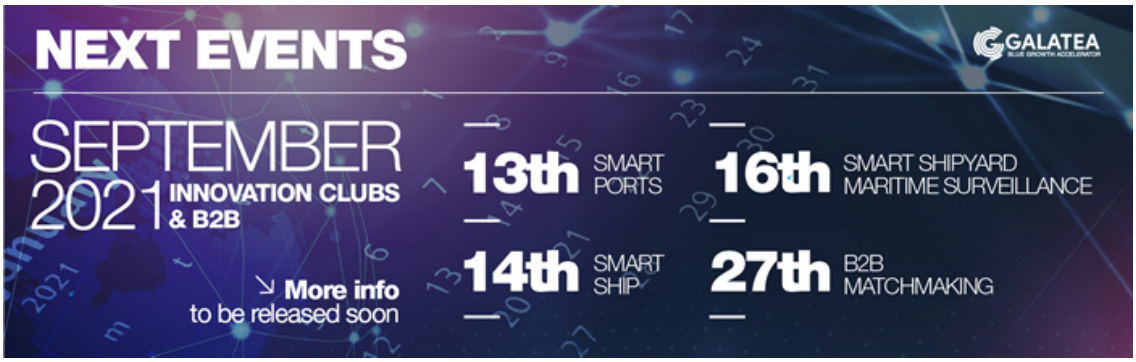
GALATEA Blue Growth Accelerator

Take a look back at the events organised by **GALATEA** at the end of the year, get all the information about the second Call for Vouchers, and follow the journey of four projects selected in the first Call for Vouchers!

2nd INNOVATION CLUBS & B2B MATCHMAKING EVENT

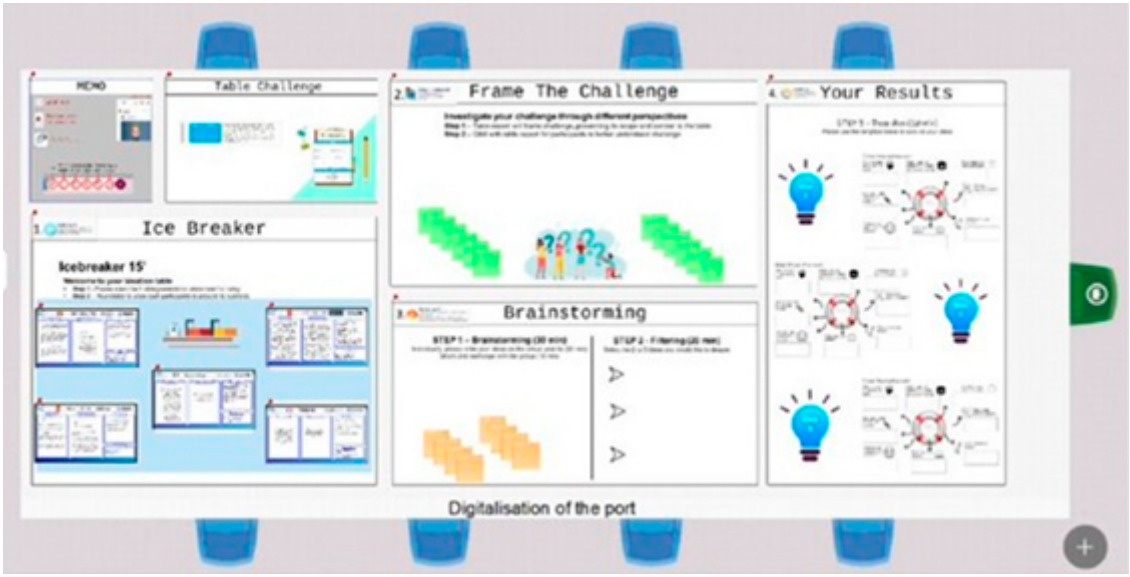
On September 13, 14 and 16, **GALATEA** organised the 2nd edition of Innovation Clubs. These creative innovation sessions aimed at fostering the early development of project ideas. Involved SMEs from various sectors and countries worked together to tackle the **22 identified GALATEA challenges** through the development of innovative and cross sectoral solutions.



In this 2nd edition, 60 participants and 16 experts from 5 European countries participated. SMEs joined around different working tables to respond digitalization, environment, security and other specific challenges faced by professionals of the Blue Economy domains: Smart Ports, Smart Ship, Smart Shipyards and Maritime Surveillance. Together, using an innovative “Design Thinking” methodology and with support of facilitators and experts, SMEs generated more than 20 ideas to address the identified challenges.

These creative sessions were followed by a B2B matchmaking event which took place on September 27th, 2021. The aim was to gather SMEs, give them the opportunity to further develop the ideas arising during the Innovation Clubs, propose others and search for partnerships to jointly apply to **GALATEA**’s 2nd Call for Vouchers.

In the morning, 41 SMEs attended a webinar presenting the **GALATEA** Open Calls. In the second half of the day 87 participants joined and 90 virtual B2B meetings were held.



CALL FOR VOUCHERS

Following the ICs and B2B events, the 2nd Call for Vouchers opened on September 29th, 2021. Innovative SMEs from the maritime / ICT / aerospace sectors could apply for direct fundings for the development of their innovative projects until 8th December 2021, 17:00 CET.

Through the **GALATEA** Innovation Support Mechanism, SMEs can get direct financial support of up to 20.000€ if they applied individually for development and technology transfer activities, or up to 60.000€ per SME if they applied in a consortium of at least 2 SMEs to develop prototype or large-scale demonstrator projects.

In the framework of the second Call for Voucher, a total of 74 applications were received from 5 different countries. Evaluation of these application have already started. The outcome of this 2nd Call will be officially announced to the candidates in February 2022 and later released to the public on the **GALATEA** website and social media pages.

CALL FOR SERVICES

In parallel to the Call for Vouchers, the **GALATEA** Call for Services remains open until September 30th, 2022, 17:00 CET.

Offered by the experts of the maritime / ICT / aerospace sectors of the **GALATEA** partners, across 5 European countries, these business services are thought of as a set of coaching services to facilitate and support SMEs to carry out their innovation and scale-up activities.

SMEs can apply individually to get support on:

- ***Business model elaboration***: Support on business model assessment to ensureproper planning set, alignment with market requirements and conditions, etc.;
- ***Technology expertise***: Support on technology potential for given markets;
- ***Internationalisation***: Support on international diffusion of beneficiary/solution to develop new business, to participate in matchmaking sessions and implement actions to maximise collaborations;
- ***Funding Opportunities***: Support on exploring funding opportunities suitable to theSMEs' mission and needs and on developing and submitting proposals to funding.

PROJECTS SUPPORTED IN 1ST CALL FOR VOUCHERS

Projects that have been funded under the 1stCall for Vouchers are under implementation. Four project leaders'beneficiaries of a Voucherhave been interviewed on the implementation of the actions, achieved steps of the projects and added-value of the **GALATEA** direct funding.

Project: DD-SHIP

Blue Growth Domain: Smart Ship
Partner: SC Travel Delta Star SRL (Romania)

The Danube Delta Green Transportation was aiming to conduct a comprehensive feasibility study on the challenges and opportunities of implementing hydrogen fueled recreational transport in the Danube Delta, an area which, according to UNESCO, represents the largest and best preserved of Europe's deltas.

The alternative fuels have a huge potential for decarbonization of the maritime sector but also on preserving biodiversity and reducing its ecological footprint. The core objectives of the project were to provide an in-depth analysis of the current status as well as future trends of the industry.

In its 4 months of implementation, the project commenced through the geographical, administrative, economical, touristic, and societal review of the Danube Delta as well as the analysis of the current state of the transport within the Delta.

Travel Delta Star SRL, representing the main player in the passengers' transportation using small boats (up to 12 passengers) within the Danube Delta, is looking forward to adapting the new technologies and clean fuels, contributing to the decarbonization of the Delta. In this regard, the current project - Danube Delta Green Transportation – has helped them to get a comprehensive Feasibility Study on the challenges and opportunities of implementing hydrogen fueled recreational transport in the Danube Delta.

Moreover, their initiative will not stop here but they want the current report to be the first step before developing a pilot project of this nature and eventually to be the first economic agent in the passengers' transport segment using hydrogen fueled boats within the Danube Delta. This study provided them with the first input and indicated the main challenges to be tackled so that the initiative will become reality.

Also, the Report provided them an understanding on the global hydrogen market in general, and the Romanian in particular, the technologies available as well as the trends and estimated timeframe for a relatively mature market, and the estimated budget both for the hydrogen fueled ships and for the hydrogen refueling stations.

The real input of the **GALATEA** project for Travel Delta Star SRL was and still is the results of the study which conceptualization was possible to achieve through the voucher received within the project.

As mentioned before, the study will be the base of our future work.

The project not only helped them in terms of financial opportunity but also gave them the opportunity to get in touch with different actors of the business environment at national level, outside their sphere of activity.

Project: PyCHARGE

Blue Growth Domain: Smart Ship
Partners: Pytheas Technology (France), FEAC Engineering (Greece), Notilo Plus (France)

PyCHARGE is a project led by PYTHEAS Technology, Notilo Plus and FEAC Engineering to develop a docking and recharge station for AUVs powered by marine currents.

Autonomous Underwater Vehicles (AUVs) are devices performing underwater tasks without any connection to a surface vessel. It carries instruments and sensors that monitor, inspect and survey underwater environments and can be used as maritime surveillance for various activities such as security, aquaculture, offshore windfarms or military operations. AUVs are a less expensive and safer alternative to traditional means of conducting such tasks.

However, the batteries' power capacity remains a constraint that keeps their missions limited in range and duration, often to as little as a few hours.

Docking and recharge stations can expand the range of possible actions and duration of AUVs' missions by recharging their batteries at sea. This way, the need to recall vehicles to the surface will be reduced which will save time and resources and lower carbon emissions.

The project combines the know-how of Notilo Plus, specialist in the design, manufacture and operation of AUVs, with the piezoelectric generators of PYTHEAS Technology to power the docking station using marine currents, while FEAC provides its expertise in hydrodynamic numerical simulation and complex systems marinization.

The PyCHARGE project will last 12 months, the end is planned for the end of August 2022.

Between September and November 2021, the specifications of the docking station and the piezoelectric generation system were defined and a numerical model to simulate the behavior of the piezoelectric generator in marine currents was built. The first hydrodynamic simulations are underway, as well as the pre-design of the docking station, including the recharging system of the AUV. The design of the docking station and the piezoelectric generator will then follow, before manufacturing and testing of the prototype in 2022.

The project is still at its beginning, but it already brought interest from several potential partners in the fields of autonomous offshore inspection and power generation from marine currents. **GALATEA** allowed the partners to take risks to develop a solution still presenting technological locks, combining skills and know-hows which would have otherwise been difficult to bring together. Considering how well the collaboration is going between the three partners, they won't hesitate to work together again.

Project: SafeSea360

Blue Growth Domain: Maritime Surveillance
Partners: Nuuk Technologies (Spain) &Interdrones Services (France)

SafeSea360 is a 360º Surveillance and Crisis Management collaborative platform that allows different actors to have real-time situational awareness of diverse emergency and SAR situations, supported by existing data sources and by a multi-drone platform. These

sources will provide video, audio, sensor and imaging in real-time to the platform allowing an agile visualization of situational awareness to all involved stakeholders without the need to deploy additional crisis room HW.

The project will take 15 months with the goal of demonstrating 3 use cases: a SAR (Search and Rescue) incident, oil spill and fire at port. So, this shall take the integrated solution from TRL5 to TRL7.

The project is advancing at good path. They are now in the design, development and ground test of components isolated. As components, they mean the orchestration and visualization of SW platform on one side and each one of the drone vehicles on the other side. Additionally, they are working on the interfaces between each component, which are the communication protocols to capture the video and sensor data from drone vehicles to the SW platform. They are facing some challenges in the architecture of the communication system since they must set up a tactical bubble that concentrates all drone streaming feeds, which are then being sent to local orchestration server which distributes it to different stakeholders that are geographically disperse. Signal Quality and Bandwidth are some of the key challenges to tackle. Next biggest milestone is the flight test beta validation.

GALATEA project is providing the partners the possibility to test the solution in real environments and thus stablish initial relationships with key potential customers. Customers are keen on testing and piloting in a secure environment the final prototype of the project. Once they validate all the use cases, this shall open them some great perspectives to replicate the experience to other similar customers, which will enable them the growth of the solution including new features.

Interdrones Services and Nuuk technologies have great complementarities and they are dedicated to the same markets, so they shall explore potential agreements and go-to-market joint strategies.

GALATEA is a great initiative funded by the European Commission with a disruptive approach to support start-ups and SMEs to join forces and face critical challenges in maritime surveillance and ports. It creates an ecosystem of companies with an innovative methodology to find complementarities to solve real issues brought by market players. What is more, **GALATEA** helps providing an important financing in an initial stage of start-ups.

Project: CORAL

Blue Growth Domain: Smart Port
Partners: SeaDAtaSp z-o.o. (Poland), BGeo Open GIS, S.L. (Spain) & Water Robotics SAS (France)

CORAL's goal is to create a comprehensive solution for small and medium ports that enables them to digitalise their data management, become more environmentally friendly, and optimise vessel management.

The offered platform serves as a single information point for the whole port. It contains three features:

- **data hub** - an online, interactive system for data storage and management, including satellite data, meteorological observations and various measurements;

- **water and air pollution monitoring with aerial and water drones** – to generate 3D data about pollution and ground/water-based stations/buoys that will continuously monitor the environment;
- **dock/vessel management application** – to digitalise the old methods of communication between ship - dock operators (emails, phone calls), provide better communication channels between port actors and create an online reservation system for dock management. A designated app will allow our clients to directly communicate with the vessels, while the IOT network will enable them to check whether the ship is present at the reserved dock.

In their platform data analysis, port management and planning of operations are easy and fast. They help ports move into the new direction, digitalise and optimise various processes, and become more "green".

Project was launched at the beginning of July and is currently on track to meet all the planned milestones. They are even slightly ahead with some of the activities planned for 2022, especially Dock/Marina reservation and communication system.

Thanks to their participation in **GALATEA** project, they got noticed by the potential clients and received more attention from the maritime industry. SeaData's previous clients – Port of Gdansk, Remontowa Shiprepair Yard and Liepaja Marina expressed their interest in the project, and SeaData also received inquiries from several other potential clients in Poland, Spain and France. They believe that thanks to the project it will be easier for them to get new clients and expand beyond the Polish market.

Thanks to the CORAL project SeaData is collaborating with companies in other countries, learning from them, exchanging ideas, and benefiting on numerous levels. They very much value their collaboration with BGEO and WaterRobotics and they see huge potential for further cooperation with them.

SeaData's participation in **GALATEA** opens a new chapter in the development of their company. They also want to add that they are thankful for Baltic Sea and Space Cluster supervision and support.
